

Amendment and Response

Applicant: Robert L. Battey et al.

Serial No.: 09/812,158

Filed: March 19, 2001

Docket No.: 10961158-6

Title: ELECTRICAL AND FLUIDIC INTERFACE FOR AN INK SUPPLY

IN THE CLAIMS

Please cancel claim 1.

Please add claims 16-30 as follows:

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--16) A replaceable ink container for use in an off axis printing system, the printing system being responsive to electrical signals produced by the replaceable ink container for controlling printing system parameters, the replaceable ink container having a leading edge defined as that edge of the replaceable ink container first received by the printing system, the replaceable ink container comprising:

a plurality of electrical contacts on the leading edge at a first side of the leading edge, the plurality of electrical contacts configured for engaging a plurality of corresponding electrical printer contacts of the printing system;

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a fluid outlet on the leading edge at a second side of the leading edge that is directly opposite to the first side such that the fluid outlet is separated from the plurality of electrical contacts, the fluid outlet being in fluid communication with the replaceable ink container and configured for engaging a fluid inlet of the printing system; and

an information storage device electrically connected to the plurality of electrical contacts.

17) The replaceable ink container of claim 16 wherein the leading edge defines a longitudinal axis with the first side and the second side being disposed on the longitudinal axis.

18) The replaceable ink container of claim 16 further including a latch feature, the replaceable ink container having an unlatched position and a latched position, wherein the latch feature is in engagement with corresponding engagement features of the printing system, the plurality of electrical contacts of the replaceable ink container are in engagement with the plurality of corresponding electrical printer contacts, and the fluid outlet is in fluid communication with the fluid inlet of the printing system.

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19) The replaceable ink container of claim 18 wherein the latch feature is a pair of latch features, and wherein one latch feature of the pair of latch features is on the replaceable ink container adjacent to the first side and another latch feature of the pair of latch features is on the replaceable ink container adjacent to the second side.

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20) A replaceable ink container for use with a printing portion of an off axis printing system, the replaceable ink container having a docked position, wherein the replaceable ink container is mounted to the printing portion so as to provide ink to the printing portion, and to provide the printing portion with electrical signals for controlling printing system parameters, the replaceable ink container comprising:

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a fluid outlet portion for providing fluid to the printing portion, wherein the fluid outlet portion is mounted rigidly to the ink container and is configured for engaging corresponding guiding features of the printing portion that align the fluid outlet portion with corresponding fluid inlet portions of the printing portion; and

an electrical interface portion having a plurality of electrical contacts for transferring the electrical signals between the replaceable ink container and the printing portion, the electrical interface portion including an engagement portion separated from and positioned opposite to the plurality of electrical contacts, wherein the electrical interface portion in the docked position engages guiding features of the printing portion to position electrical contact portions of the printing portion between the engagement portion and the plurality of electrical contacts to electrically engage the replaceable ink container with the printing portion without applying a force to the replaceable ink container that would affect engagement of the fluid outlet portion with the corresponding fluid inlet portions of the printing portion.

21) The replaceable ink container of claim 20 wherein the electrical interface portion is a cavity within an outer surface of the replaceable ink container, the cavity having a first inner surface defining the engagement portion and a second inner surface having the plurality of electrical contacts thereon.

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22) The replaceable ink container of claim 21 wherein the fluid outlet portion is disposed on the outer surface of the replaceable ink container.

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23) The replaceable ink container of claim 22 wherein the outer surface of the replaceable ink container is a leading edge defined as that edge of the replaceable ink container first received by the printing portion.

24) The replaceable ink container of claim 23 wherein the leading edge has a longitudinal axis and a lateral axis perpendicular to the longitudinal axis, and wherein the longitudinal axis bisects the fluid outlet portion and the cavity defining the electrical interface portion.

25) The replaceable ink container of claim 24 wherein the fluid outlet portion is at a first end of the longitudinal axis and the cavity defining the electrical interface portion is at a second end of the longitudinal axis opposite the first end.

26) A replaceable ink container for use in an off axis printing system, the printing system being responsive to electrical signals produced by the replaceable ink container for controlling printing system parameters, the replaceable ink container comprising:

a leading edge defined as that edge of the replaceable ink container first received by the printing system, the leading edge having a longitudinal axis and a lateral axis perpendicular to the longitudinal axis;

an electrical interface portion having a plurality of electrical contacts for transferring the electrical signals between the replaceable ink container and the printing system, wherein the electrical interface portion is a cavity within the leading edge of the replaceable ink container, the cavity being bisected by the longitudinal axis and having an inner surface with the plurality of electrical contacts thereon such that the plurality of electrical contacts are configured for engaging a plurality of corresponding electrical printer contacts of the printing system; and

a fluid outlet on the leading edge such that the longitudinal axis bisects the fluid outlet, wherein the fluid outlet is separated from the cavity defining the electrical interface portion, with the fluid outlet being in fluid communication with the replaceable ink container and configured for engaging a fluid inlet of the printing system.

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- 27) The replaceable ink container of claim 26, and further including:
an information storage device electrically connected to the plurality of electrical contacts.
- 28) The replaceable ink container of claim 26 wherein the fluid outlet is configured to receive fluid inlet of the printing system along a fluid interconnect axis, and wherein interengagement of the electrical interface portion with the corresponding electrical printer contacts of the printing system is free from any forces acting on the replaceable ink container in a direction perpendicular to the fluid interconnect axis.
- 29) The replaceable ink container of claim 26 wherein the electrical interface portion is fixed to the replaceable ink container and the corresponding electrical printer contacts of the printing system float on the printing system.
- 30) The replaceable ink container of claim 26, and further including:
a latch feature, wherein the replaceable ink container has an unlatched position and a latched position, in the latched position the latch feature is in engagement with corresponding engagement features of the printing system, wherein the plurality of electrical contacts of the electrical interface portion engage the corresponding electrical printer contacts of the printing system, and wherein the fluid outlet is in fluid communication with the fluid inlet of the printing system.